Event Driven Identity Management

Tero Hakkarainen, Software Engineer
Lauri Viitanen, Software Engineer

About Helsinki Metropolia University of Applied Sciences

- A multidisciplinary university of applied sciences
- The largest in Finland
- Operating out of Helsinki, Espoo and Vantaa
- Four fields of study:
    - Culture
    - Business
    - Health Care and Social Services
    - Technology
- 16,700 students
- 2,290 Bachelor's and 210 Master's graduates in 2012
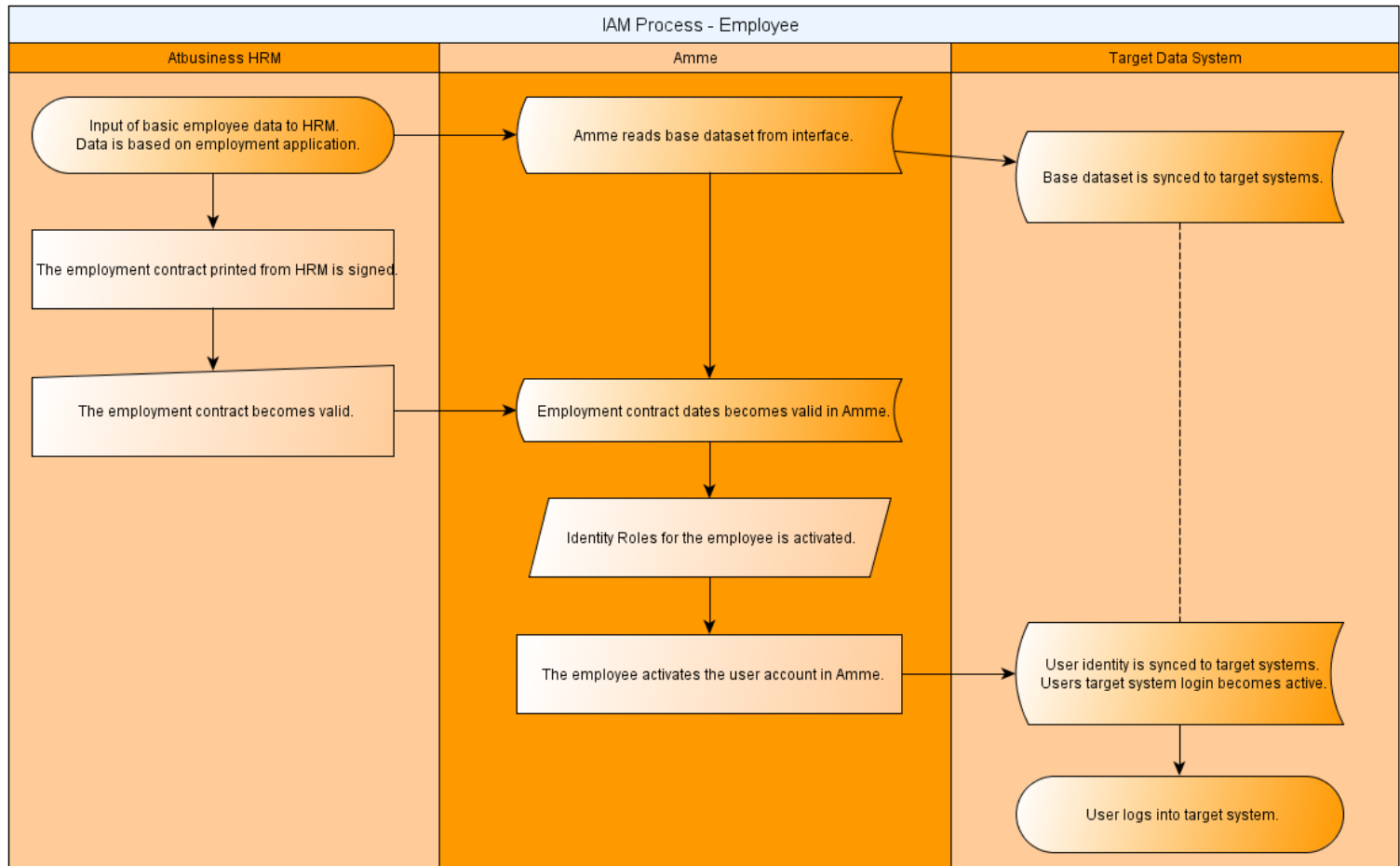- Staff 1,250

About Metropolia IT Services

- 17 facilities in Helsinki metropolitan area
- network of over 5000 workstations and servers
- different customer profiles
  - students
  - staff
  - partners
  - guests
- multiple operating systems and platforms
  - workstations
  - web
  - mobile

IAM system architecture in Metropolia
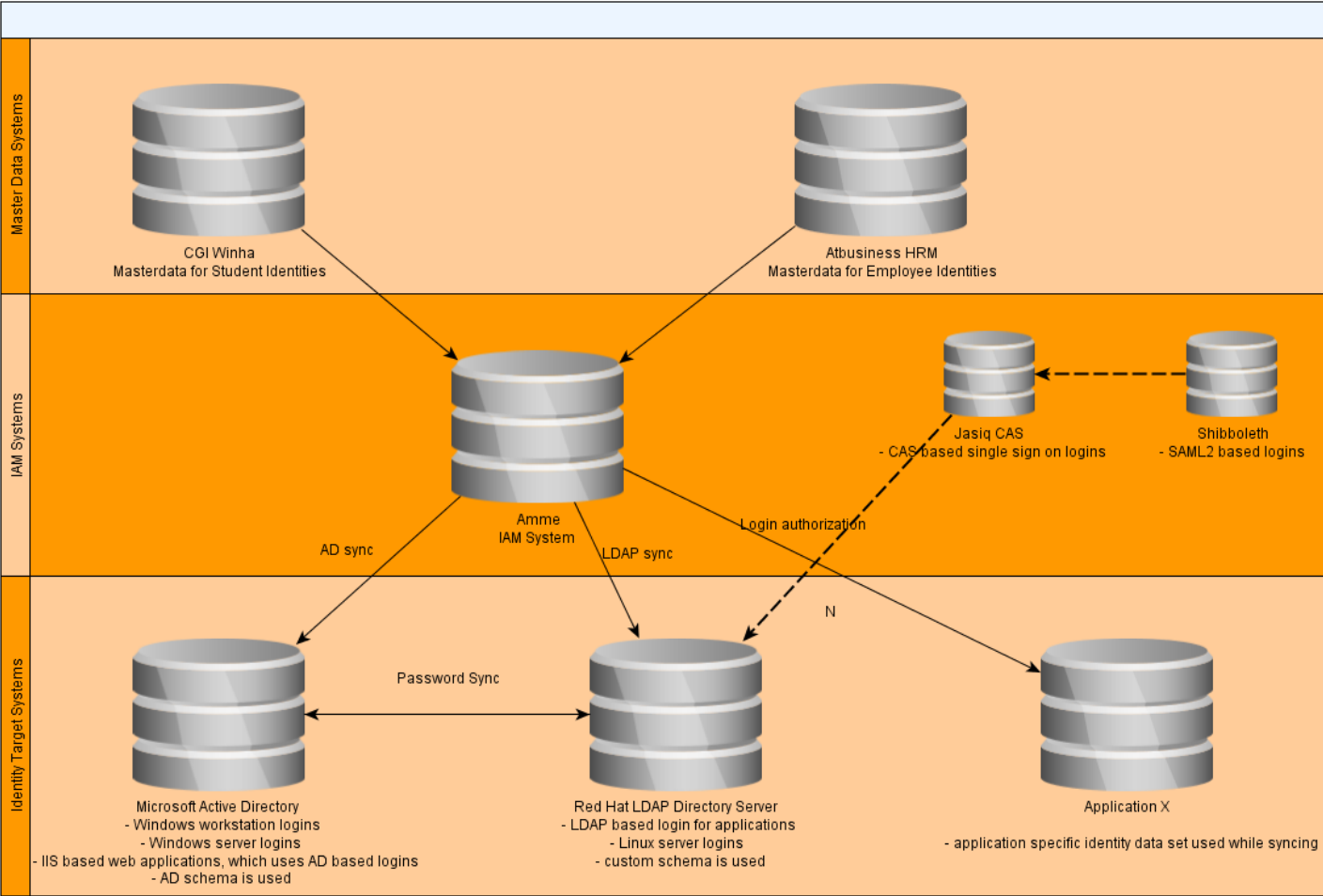
Example: IAM process for employee in Metropolia

Amme - IAM system in Metropolia

Identity and Role in Amme

Identity   = Aggregate(Roles)

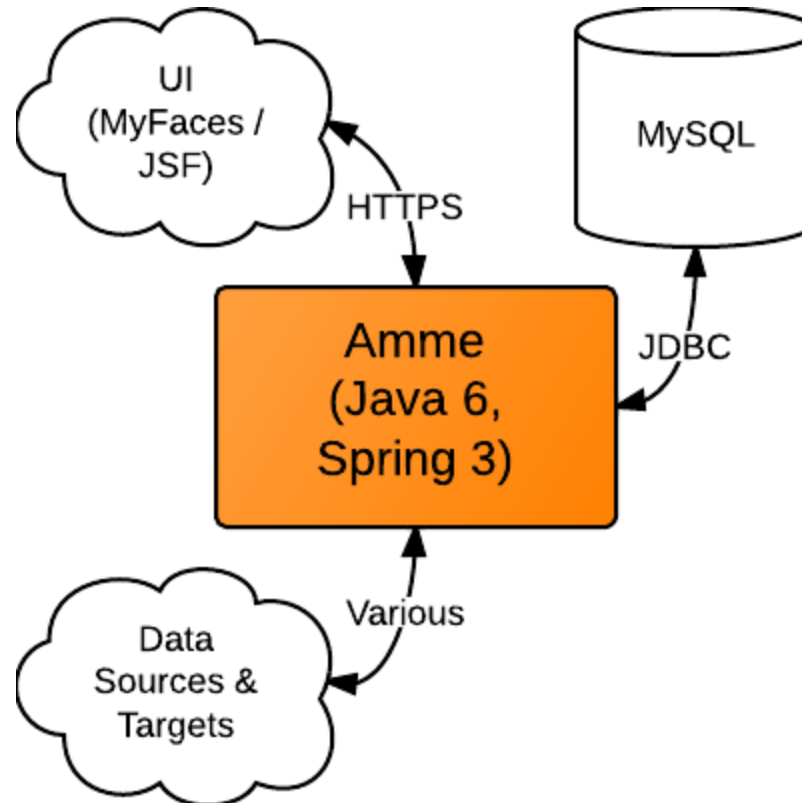Role   = Collection of system specific attributes

Identity and Role in Amme

Identity			= Aggregate(Roles)
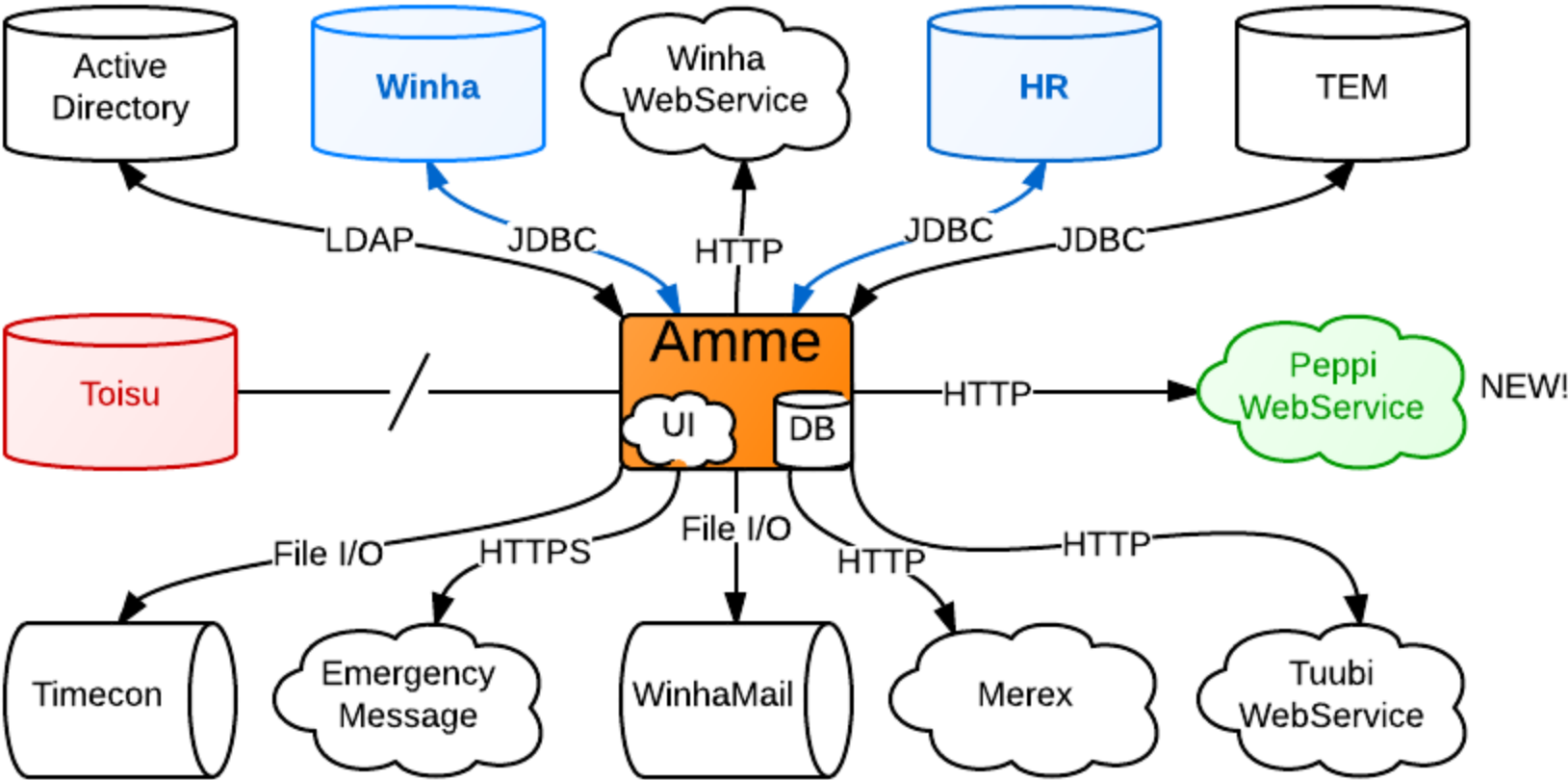Role				= Collection of system specific attributes

Aggregate	=
- Build new attribute from existing attributes
  - e.g. full name = first name + last name
- Build existing attribute from strongest role that contains the attribute
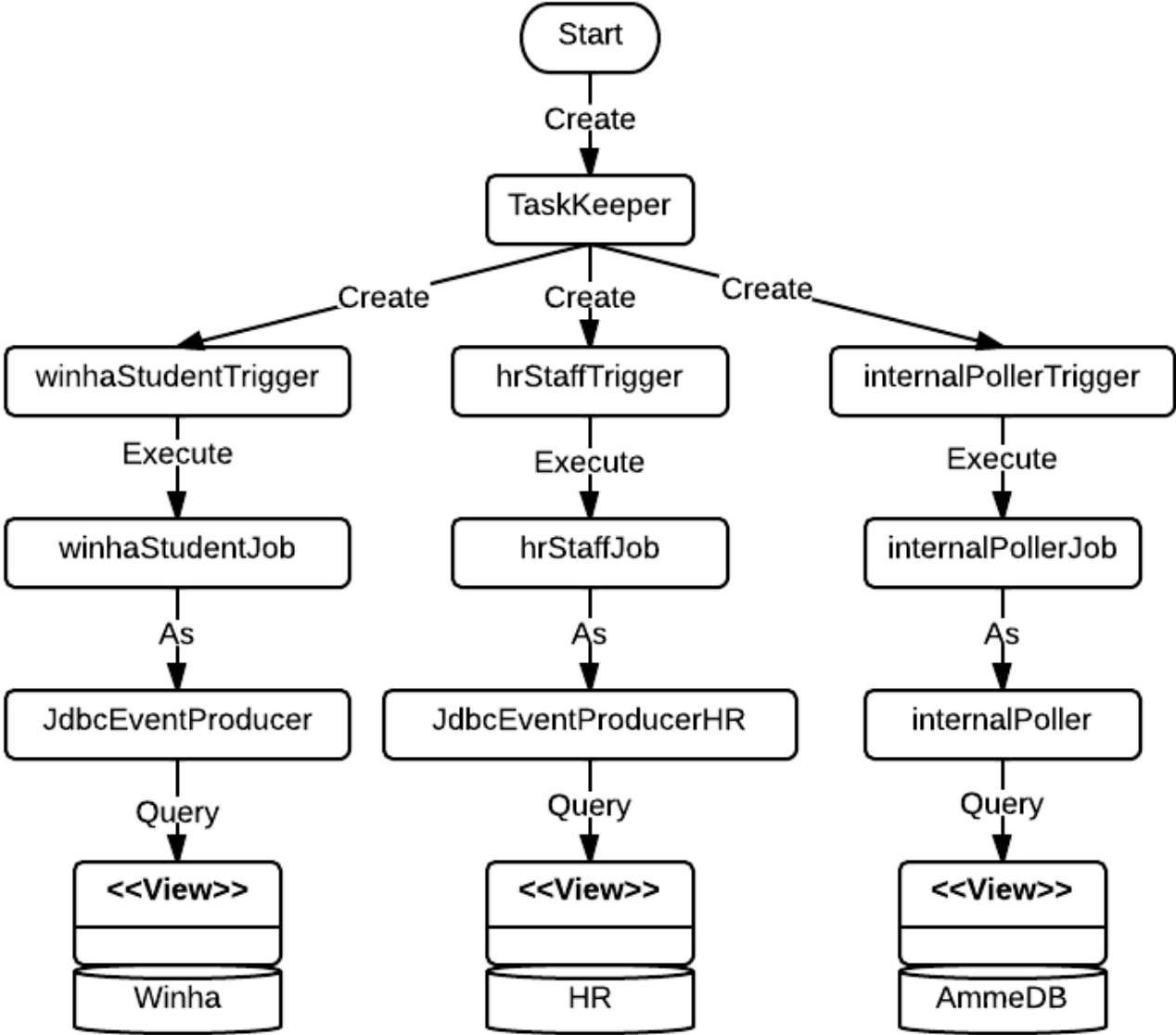
Amme Architecture

Amme Data Sources & Targets

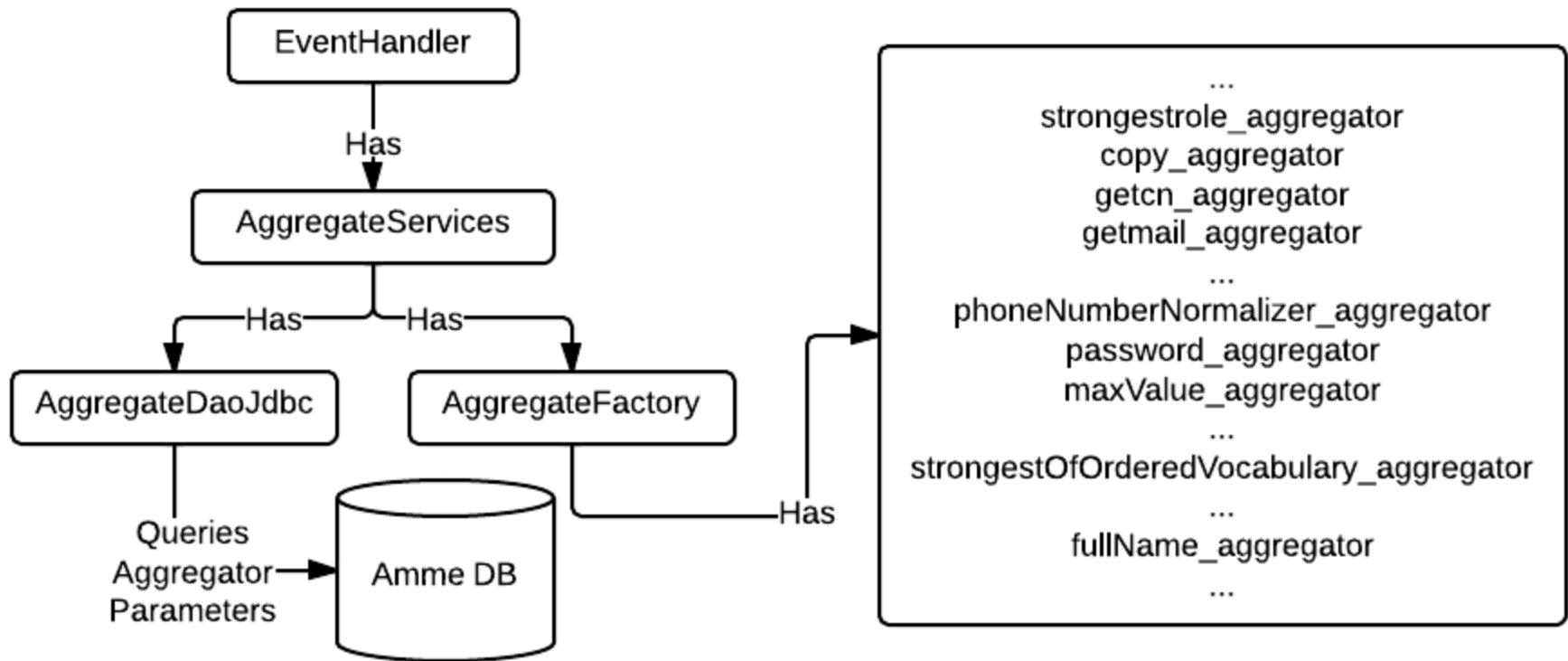# Amme Event Triggers

Amme Aggregators

Performance of Amme

Environment
- CPU: Intel(R) Xeon(R) CPU @ 2.70GHz
- Memory: 4 GB DIMM @ 1600 Hz

Daily Usage:
- CPU Time: 1 min
- Memory: 100 MB
- Disk: 700 MB
  (June 2013)
- Events / Day: 500 ± 10 %
- Target updates / Day: 4000 ± 5 %

Benchmark University's Specs

Environment

- 14500 Students, 3400 Non-students
- CPU: 2 x SUN Ultrasparc-IIIi @ 1500 MHz
- Memory: 2 GB RAM

Quirks

- Passwords & group rights updated in real time
- Everything else updated daily

Benchmark University's Performance

- Run time: 1 hour (0.04x)
- CPU time: 5 minutes (3x)
- RAM usage: N/A (0.1x ?)
- Disk usage: 10-13 GB (14-19x)

Event driven identity management

Conclusions

Helsinki
Metropolia
University of Applied Sciences

Event driven identity management from business process point of view

- human interaction with data is minimized: time savings
- changes to identity data is managed as soon as needed, e.g.
  - ◦ password change at once to all systems
  - ◦ identity end of life is handled properly and automatically
- real life data handling processes for lifespan of identities: master data ownership and data update responsibilities are clear

Event driven identity management from IT point of view

- immediate: changes to data is synced immediately
- trackable: all changes are logged
- accurate: no manual copying of master data
- control: Metropolia is in total control of identity data

Q & A

Expertise and insight

for the future

THANK YOU!

www.metropolia.fi/en/
tero.hakkarainen@metropolia.fi
lauri.l.viitanen@metropolia.fi

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